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## **I. PROJECT UNDERSTANDING**

The Scope of Services included in this proposal is to collect data, refine alternatives and coordinate with involved agencies in the development of a Project Study Report (PSR) as a method to obtain final approval by the City of Milpitas, Santa Clara Valley Transportation Authority (VTA) and Caltrans for the proposed widening of Calaveras Boulevard. This Scope of Services will be for the Calaveras Boulevard (SR 237) widening project identified and conceptually developed in the I-680/I-880 Cross Connector Study recently completed by the VTA. The work is anticipated to include widening the existing four-lane facility from four lanes to six lanes beginning at Town Center Drive in the east to Abel Street on the west. In addition, this Scope assumes auxiliary lanes will be added to the current six-lane facility between Abel Street and Abbott Avenue. The proposed widening will require replacement of the bridges over Main Street, the UPRR and the proposed BART extension.

## **II. DETAILED SCOPE OF SERVICES**

### **Task 1 – Project Management**

Nolte will designate a Project Manager who will be responsible for initiating the work, developing the Project Work Plan, implementing the project management procedures and controls, and maintaining effective communications with the VTA and other involved agencies and organizations (utilities).

#### **Task 1.1 - Prepare Project Work Plan (PWP)**

Nolte will prepare a Project Work Plan (PWP) to help monitor and support project progress. The PWP shall include the following:

##### Project Design Criteria

Nolte will document agreed upon design criteria, updating these criteria as project development progresses. Nolte will identify from existing documentation the criteria used to date, and any modifications required thereto will be incorporated in this effort.

##### Quality Assurance / Quality Control

Nolte will adapt and follow procedures for maintaining quality control and quality assurance for this project. Formal quality control reviews of project geometrics and document continuity will be performed prior to the initial PSR submittal to the VTA and the City of Milpitas.

##### Project Schedule

Nolte will develop and maintain a project schedule that details activities of each task in an appropriate time frame consistent with the goals of the project. Major milestones will be

addressed with significant tasks required to meet these milestones included in the schedule. Also included in this schedule will be tasks required of the VTA, the City of Milpitas, Caltrans, Nolte, Subconsultants, and other agencies. The schedule will be monitored, updated and reviewed at team meetings. An initial schedule will be developed and provided to the VTA for review and comment. This schedule will be updated through the course of the project.

Budget

Nolte will develop and maintain a controlled budget and monitoring program for the project.

Project Filing System

Nolte will develop and maintain a project file system using Caltrans' system.

**Task 1.2 - Agency Coordination**

Nolte will contact or meet with VTA, the City of Milpitas, Caltrans and the UPRR to coordinate technical aspects of the project including coordination with the proposed BART extension, verify processing requirements and discuss additional agency concerns. Nolte will prepare communications (letters, reports, meeting minutes) as necessary to document decisions reached by the various agencies.

**Task 1.3 – Subconsultant Coordination**

Nolte will contract and coordinate with two (2) subconsultants, TJKM Transportation Consultants and Jones & Stokes Associates, Inc. for the project. Nolte will be responsible for coordinating the scope, schedule and budgets with said subconsultants.

**Task 1.4 – Meetings**

Nolte will prepare for and attend meetings as listed below. Following each meeting, minutes will be prepared by Nolte detailing decisions reached and noting action items agreed upon at the meeting. These minutes will be distributed to attendees within one (1) week of the meeting.

Design Team Meetings

It is anticipated that monthly team meetings with the VTA (and others as determined on a meeting-to-meeting basis) will be required to monitor progress, determine approaches and resolve issues for a period of twelve (12) months. In addition, a total of eight (8) Design Team Meetings have been allotted for the project.

Technical Meetings

Supplemental technical meetings (six assumed), will be held directly with the VTA, City, Caltrans' branches or other agencies to focus on specific technical issues. These meetings are in addition to the Design Team meetings.

Alternatives Review Meetings

Two (2) meetings are anticipated for this purpose. These meetings will review the geometrics and major element assumptions.

Miscellaneous Meetings

An additional three (4) meetings have been allocated in order to coordinate the details and approval for the Project Study Report (PSR). One of these meetings will be a meeting with Milpitas City Council or Transportation Sub-Committee. Nolte will attend and write minutes for these additional meetings. Public meetings are not included for this Scope of Services. Should they be required, preparation and attendance will be provided as extra work on a time-and-materials basis.

**Task 1.5 – Prepare Progress Reports**

Nolte will prepare and submit budgets, progress and performance reports, and invoices on a monthly basis. Progress and performance reports will be a one-page summary.

***Deliverables for Task 1 – Project Management***

- Project Work Plan (PWP)
- Meeting Agendas and Minutes
- Update Project CPM Schedule
- Progress Reports and Monthly Invoices
- Correspondence necessary to coordinate the project

**Task 2 – Supplemental Data Collection and Review**

Nolte will review additional information regarding the proposed project provided by VTA and other agencies and consultants. In addition, previously collected data will be reviewed and utilized. Specifically, Nolte will:

- Obtain and review additional information from projects within the study vicinity. The purpose of this review is to identify issues impacting project costs. This includes compiling

an Initial Site Assessment (ISA) report which will also be used to support the Environmental Review and the Hazardous Materials section of the PSR.

- Environmental research and review.
- Translate the current metric topography to English units for this PSR effort.
- Provide supplemental field surveys to validate topography being used for the PSR.

It is assumed that topography/planimetrics obtained as part of the Corridor Study will be adequate for the Project Study Report (PSR), with some supplemental field survey required.

***Deliverables for Task 2 – Supplemental Data Collection and Review***

- A summary of new data collected for this project and anticipated impact to project
- Phase 1 database search for Environmental Review
- Initial Site Assessment Report
- Converted topography (from metric to English units)
- Validated topography reconciled with supplemental field survey

**Task 3 – Conceptual Alternatives**

Based on meetings with the City of Milpitas, Caltrans and the VTA, the project will be developed to a Project Study Report (PSR) level. The project description follows:

**Calaveras Blvd. Widening**

Calaveras Blvd. will be widened from four to six lanes beginning at Town Center Drive in the east. The widening will continue westerly, over the UPRR (future BART) tracks and over Railroad Avenue and Main Street. The widening from four to six lanes will end at N. Abel Street. Between Abel Street and Abbott Avenue, Calaveras Blvd. will be widened from six to eight lanes by adding auxiliary lanes. The existing structures at the overcrossings will be impacted to accommodate the widening, and the project will evaluate the need to replace (as opposed to simply widen) the structures. At this time it is anticipated the structures will require replacement. Right turn pockets will be evaluated at the intersections within the project limits.

Alternative configurations for the Calaveras Blvd./Serra Avenue intersection, where an entrance feature to the midtown area is planned, will be developed as part of this Study. The intersection of Calaveras Blvd. and Abbott Avenue will also be considered for reconfiguration to improve the approach angles at this location. Up to three (3) concepts will be developed at each location. Operational evaluation for each option will be performed.

Alternative development will be coordinated with the on-going midtown revitalization efforts. Specific elements to be coordinated include ramp termini relative to site access for new projects in the area.

Based on meetings to be held with the City of Milpitas, Caltrans, the VTA and BART, up to two (2) additional build alternatives beyond those developed in the initial corridor study may be considered. These additional alternatives are anticipated to be refinements of the previous alternatives that meet the current goals for the corridor. A no-build alternative will also be analyzed for the projects. The initial basis for these alternatives will be as shown in the Draft Conceptual Study Report dated May, 2004.

### **Task 3.1 – Alternatives Development**

The agreed upon alternatives for the project will be developed to PSR level with the ultimate goal of project approval. The project will be developed to produce approximately 15% geometric horizontal and vertical design, utility base maps with key conflicts identified, impacts to existing structures defined, APS for impacted and new structures, design exceptions identified, conceptual level drainage layout compiled, preliminary right-of-way needs identified, 30% level typical cross sections, and VTA Standard cost estimates.

### **Task 3.2 – Alternatives Assessment**

Following the development of these alternatives, Nolte will meet with the VTA to review and discuss the alternatives. A formal matrix summarizing the alternatives, pros and cons, and order-of-magnitude costs for each alternative will be developed. Furthermore, items such as potential for phasing improvements will be considered and noted in this overall matrix.

This matrix will be used in a meeting with the VTA, Caltrans, and the City of Milpitas to compare and contrast the various alternatives and benefits thereto. At the initial meeting with these agencies, it is anticipated that modifications to these alternatives will be requested. Nolte will update the geometry and matrix based on this meeting. A second meeting will then be held at which time it is planned that agreement on the approach for the alternatives will be obtained.

### **Task 3.3 – Prepare Summary Letter**

The assessment completed in Task 3.2 will be documented in a letter summarizing the Task 3 process, documenting why certain alternatives were selected to proceed forward and others were not.

### **Task 3.4 – Refine Alternatives**

Following agreement on the options to be further developed, Nolte will combine these options and refine the preferred alternative. More detailed geometry will be developed to a 30% level of detail. During this process, issues will be identified to a more detailed level, and right-of-way requirements, structure lengths, utility relocations and similar impacts resulting from the

preferred alternative will be identified and quantified. The detailed geometry will be coordinated with traffic and environmental studies as described below.

***Deliverables for Task 3 – Conceptual Alternatives***

- Alternative Matrix and geometry
- Order-of-Magnitude Cost for each alternative
- Letter summarizing agreed upon preferred alternative and an explanation of why that alternative was selected and why others were not
- 30% level design geometry and cost for each preferred alternative

**Task 4 – Traffic Operations**

**Task 4.1 – Review Current 2030 VTA Model**

The Nolte team will review the available data from previous studies. This will include the review of current 2030 VTA model projections for the corridor defined in Task 3.

**Task 4.2 – Model Calibration**

**Traffic Operations Analysis**

The Nolte team will prepare new traffic analysis as required for the PSR and as required for the Environmental Impact Report (EIR) (e.g. planning horizon for traffic forecasts).

A.M. and P.M. peak-hour Levels of Service and intersection delay will be reviewed and evaluated. Where needed, Levels of Service calculations will be conducted for the Study intersections. The Level of Service (LOS) analysis will utilize the 2000 Highway Capacity Manual methods.

The proposed study intersections are:

1. Calaveras Blvd and northbound I-680 ramps
2. Calaveras Blvd. and southbound I-680 ramps
3. Calaveras Blvd. and N. Milpitas Blvd.
4. Calaveras Blvd. and Hillview Drive.
5. Calaveras Blvd. and Eastbound Off-Ramp to Main Street
6. Calaveras Blvd. and Eastbound On-Ramp from Carlo Street
7. Calaveras Blvd. and Abel Street
8. Calaveras Blvd. and Butler Street
9. Calaveras Blvd. and Serra Way
10. Calaveras Blvd. and Abbott Avenue
11. Calaveras Blvd and northbound I-880 Off-ramps
12. Calaveras Blvd. and southbound I-880 Off-ramps

#### **Task 4.3 – Future Year Forecasts**

All analysis would be based on currently available model projections. This will include graphics of projected peak hour model projections for 2030 and intersection Level of Service (LOS) analysis for the existing and future improved conditions using Synchro software. Up to three (3) build alternatives have been assumed. The LOS analysis will be based on the 2000 HCM methodology. The LOS and Delay will be calculated for the following conditions:

- Existing
- Year 2030 No Project
- Year 2030 Project

The study will also model runs and LOS analysis to evaluate the potential impact of extending Abbot Avenue to Tasman Drive to the south.

#### **Task 4.4 – Traffic Operations Analysis**

This task is a supplemental task that can be included if the new VTA traffic model is to be used.

TJKM will use the Synchro software for LOS analysis and traffic simulation of the traffic flow through the Calaveras corridor. This is a good complement to the VTA forecasting model, especially when consideration is made of intersection geometric and operating alternatives changes such as auxiliary lanes, interchange configuration or signal weaving sections, etc.

The Nolte team will prepare new traffic analysis as required for the PSR and as required for the Environmental Impact Report (EIR) (e.g. planning horizon for traffic forecasts).

A.M. and P.M. peak-hour Levels of Service (LOS) and intersection delay will be reviewed and evaluated. LOS calculations will be conducted for all study intersections. The LOS analysis will utilize the 2000 Highway Capacity Manual methods. LOS and delay will be calculated

#### ***Deliverables for Task 4 – Traffic Operations***

- Traffic Operations Report (up to 3 build alternatives)

#### **Task 5 – Environmental Review**

As part of Task 5, during the development of the preferred alternative, an environmental review will be performed to determine issues associated with each of the alternatives being considered. The environmental review will be documented in the Caltrans Preliminary Environmental Assessment report (PEAR) format (Caltrans PEAR Handbook, 2001). Consistent with the Caltrans PEAR Handbook, the environmental review will be documented on a PEAR form.

Contents of the review will include a summary of the Purpose & Need, a brief Environmental Setting, discussion of resources identified, a description of potential environmental effects, permits and description of possible mitigation measures. The PEAR form will also include a list of sources consulted and recommendations relating to the project and proposed alternatives.

Specific tasks to be performed:

- Undertake field review to determine environmental resources and issues.
- Research hazardous materials database search.
- Research archaeology/historic and paleontologic literature database search.
- Conduct preliminary consultation related to cultural properties/Tribal lands/Tribal leaders
- Conduct reconnaissance level biological resources review.
- Identify potential community/socioeconomic impacts
- Assess possibility of visual/scenic resource impacts.
- Identify potential water quality/hydrology/floodplain impacts.
- Identify potential Section 4(f) issues
- Prepare written preliminary environmental evaluation (PEAR form) to identify environmental resources and issues; type of environmental document needed; mitigation needs/issues/concerns.

Caltrans' Design Standards will apply to that area within the Caltrans' right-of-way and State jurisdiction. The City of Milpitas Standards will be used as the basis of design for improvements outside these areas.

***Deliverables for Task 5 – Environmental Review***

- PEAR report

**Task 6 – Technical Support Documents**

**Task 6.1 - Prepare Advanced Planning Studies (APS)**

Nolte will prepare the Advance Planning Studies (APS) for the structures affected in the preferred alternatives. The APS will include preliminary layout, profile, elevations and preliminary cost estimate for the structural components of the proposed structure being evaluated. These structures are listed below:

Calaveras Blvd. Widening (4 Total, 1 each for replacement and widening)

- Calaveras Blvd. overcrossing at future BART corridor (existing structures)
- Calaveras Blvd. overcrossing at Railroad Avenue and Main Street (existing structures)

**Task 6.2 - Identify Permit Requirements**

Permits likely to be required will be identified based on the results of the environmental review. A matrix will be developed listing the permits, permitting agency, resources affected, general range of effect, and anticipated special conditions (mitigation). Consultation conducted in developing the matrix will be documented.

**Task 6.3 - Prepare Staging Scheme**

One (1) staging scheme will be developed and discussed on a conceptual level for the preferred alternative. Geometry, cost, permitting, traffic and land use will be addressed for the staging scheme. Small scale (1"=100') conceptual staging plans will be prepared for the preferred alternative.

**Task 6.4 – Design Exceptions**

This Scope of Services assumes both Mandatory and Advisory Design Exceptions will be required for the corridor. One (1) fact sheet will be prepared for all Mandatory Exceptions and a separate fact sheet will be prepared for all Advisory Exceptions as required for PSR approval for the preferred alternative. These fact sheets will be reviewed and coordinated with Caltrans District 4 personnel, as well as Caltrans Headquarter's geometrician. It is anticipated that one (1) draft and one (1) final submittal will be needed (total of two submittals).

**Task 6.5 – Update Cost Estimates**

The cost estimates prepared for the corridor study will be updated in Caltrans' PSR format, and in VTA's format. Updates will occur for both the Draft and Final PSR submittals. In addition to the updates of existing estimates, new estimates will be prepared in each format (PSR and VTA) for new alternatives.

**Task 6.6 – R/W Data Sheets**

Right of Way data sheets will be prepared for each alternative under consideration in the PSR. The data sheets will follow the current format established by Caltrans, identifying utility relocations and property acquisitions, including approximated temporary easements. An administrative draft data sheet will be prepared for each alternative for review by Caltrans and the VTA prior to submission of the draft PSR. The data sheets will then be updated for the Draft PSR and for the Final PSR based on comments from the agencies mentioned.

***Deliverables for Task 6 –Technical Support Documents***

- Up to four (4) Advanced Planning Studies
- Permit matrix summarizing permit requirements
- Updated Cost Estimates in PSR and VTA formats
- R/W data sheets
- Draft Fact Sheets (1 Mandatory, 1 Advisory)
- Final Fact Sheets (1 Mandatory, 1 Advisory)

**Task 7 – Project Study Report (PSR)**

Under this task, Nolte will work with the VTA, the City of Milpitas and Caltrans to produce and obtain approval of the PSR document. The preferred alternative chosen will be identified in this report. The PSR will follow the format and content requirements of the PSR as defined in Caltrans' Guidelines for the Preparation of Project Study Report dated September, 1991. The outline of the report follows:

1. Introduction
2. Background
3. Need and Purpose
4. Alternatives
5. System Planning
6. Hazardous Material/Waste
7. Traffic Management Plan (TMP)
8. Environmental Clearance
9. Funding/Scheduling
10. District Civil Engineer's Stamp
11. Project Manager/Attachments

The following clarifies specific areas of work involved in the PSR preparation, including supplemental items of work required.

**Task 7.1 - Prepare Attachments for PSR**

As defined in Caltrans' guidelines, the following attachments will be prepared and submitted with each PSR:

- Location Map (8 ½ x 11)
- Geometric Plans

- Typical Cross Sections
- Environmental Documentation
- Preliminary Project Cost Estimate
- Executed Pre-Approved Cooperative Agreement (by others)
- Signal Warrants (if appropriate)
- R/W Data Sheet

**Task 7.2 - Prepare Administrative Draft Project Study Report (ADPSR)**

Nolte will prepare and assemble an Administrative Draft Report (ADPSR) for review by the VTA staff. Five (5) copies of the ADPSR will be delivered to the VTA for this purpose.

**Task 7.3 - Prepare Draft Report**

Upon receipt of comments on the ADPSR from the VTA, Nolte will meet with the VTA staff to understand comments and resolve issues. Nolte will then update and assemble the ADPSR for review by the City of Fremont, City of Milpitas, Caltrans and the VTA. Copies of the ADPSR will be prepared for distribution at this time.

**Task 7.4 - Prepare Final Project Study Report (PSR)**

Upon receipt of comments on the Draft Report from the reviewing agencies, Nolte will meet with the VTA staff to understand comments and resolve issues. Nolte will then update and assemble the final PSR for approval by the VTA, the City of Milpitas and Caltrans. Copies of the final PSR will be prepared for distribution at this time. This Scope accounts for one (1) iteration (two "final" submittals) at this phase of the project.

***Deliverables for Task 7 – Prepare Project Study Report***

- Five (5) copies of the ADPSR, including attachments
- Ten (10) copies of the Draft PSR, including attachments
- Ten (10) copies of the Final PSR, including attachments

**Task 8 – Additional Services**

Members of the Project Team are available to assist the VTA staff on project issues on an as-needed and as-requested basis. Examples of such issues could include assisting the VTA staff in developing a financial strategy for near and long term improvements or other projects, facilitating the development and execution of Caltrans/Local Agency cooperative agreements,

assisting in the development of project delivery strategies and schedules, assisting with programming issues, and other issues identified by VTA staff in assessing the feasibility or state of readiness of other projects and strategizing on statewide issues affecting the programming and deliver of the VTA program.

**IV. FEE**

<b>TASK</b>	<b>FEE</b>
• Task 1 – Project Management	\$ 58,400
• Task 2 – Supplemental Data Collection & Review	\$ 43,500
• Task 3 – Conceptual Alternatives	\$ 53,860
• Task 4 – Traffic Operations	\$ 77,430
• Task 5 – Environmental Review	\$ 16,803
• Task 6 – Technical Support Documents	\$ 45,500
• Task 7 – Project Study Report	\$ 27,500
<b>TOTAL:</b>	<b>\$ 322,993</b>
<b>CONTINGENCY:</b>	<b>\$ 27,007</b>
<b>TOTAL:</b>	<b>\$ 350,000</b>

**V. ASSUMPTIONS**

- Topography and previously developed geometry/drawings used in the Conceptual Study Report will be utilized in current AutoCad format. However, the current Topography will be converted to English units and supplemental survey will be required to confirm key features and pick up any new work that may not be reflected in the plans.
- Potholing of existing utilities is not included in this Scope of Services.
- Geotechnical information required for the study is available from VTA as part of the BART work currently underway, and no additional geotechnical investigation will be performed with under this Scope of Services.
- Plans will be prepared in English units at a scale of 1"-100', or as appropriate for the corridor.
- This Scope and Fee are based on an overall development schedule of eight (8) months for meetings and alternatives development (to the point of 'first' Final PSR submittal to Caltrans for approval), and 18 months maximum for approval of the PSR.
- Public meetings are not included for this Scope of Services. Should they be required, preparation and attendance will be provided as extra work on a time-and-materials basis.